

Notice of Allowability

Application No.

10/631,793

Examiner

Thomas L Dickey

Applicant(s)

TAKIKAWA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to IDS filed 1/15/2004.
2. ☒ The allowed claim(s) is/are 18-36.
3. ☒ The drawings filed on 01 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/547,915.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 8/1/03 and 1/15/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

ckinhloan Tran
Minhloan Tran
Primary Examiner
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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the Title:

Change the Title to read: PIN LAYOUT OF DUAL BAND RECEIVER WITH TWO INPUT PADS/PINS RESTRICTED TO A SINGLE SIDE OF A FOUR-SIDED PACKAGE

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

Claims 24-30 are allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as a semiconductor integrated circuit device for receiving operation of a mobile radio communication apparatus comprising a sealing package enclosing a semiconductor chip and having four sides being formed in rectangular shape in a plane view; a first radio frequency input filter into which a radio frequency reception signal of a first frequency band is to be inputted; a second radio frequency input filter into which a radio frequency reception signal of a second

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frequency band is to be inputted, the second frequency band being different from the first frequency band; a first input pin electrically connected to said first radio frequency input filter; and a second input pin electrically connected to said second radio frequency input filter, wherein said first and second input pins are monolithically integrated on said semiconductor chip, wherein said first and second radio frequency input pins are coupled with said first and second radio frequency input filters, respectively, at one of four sides of said semiconductor chip, wherein said first and second radio frequency input pins are disposed at said one side, and wherein said radio frequency reception signal of the first frequency band is to be applied to said first input pin and said radio frequency reception signal of the second frequency band is to be applied to said second input pin, as recited in claim 24.

Rozenblit et al. 6,658,237 discloses a semiconductor integrated circuit device for receiving operation of a mobile radio communication apparatus comprising a semiconductor chip, a first radio frequency input filter into which a radio frequency reception signal of a first frequency band is to be inputted; a second radio frequency input filter into which a radio frequency reception signal of a second frequency band is to be inputted, the second frequency band being different from the first frequency band; a first input pin electrically connected to said first radio frequency input filter; and a second input pin electrically connected to said second radio frequency input filter, wherein said first and second radio frequency input pins are coupled with said first and second radio frequency input

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filters, respectively, and that said radio frequency reception signal of the first frequency band should be applied to said first input pin and said radio frequency reception signal of the second frequency band is to be applied to said second input pin. Note figures 10, 16,17, 18, and 19 and column 21 lines 22-65 of Rozenblit et al. Rozenblit et al. 6,658,237 does not disclose or suggest that the first and second input pins should be monolithically integrated on said semiconductor chip, and should both be disposed at one of four sides of said semiconductor chip.

Claims 18-23 and 31-36 are allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as a semiconductor integrated circuit device for receiving operation of a mobile radio communication apparatus comprising a first low noise amplifier into which a radio frequency reception signal of a first frequency band is to be inputted; a first receiving mixer for the first frequency band into which an output signal from the first low noise amplifier is to be inputted; a second low noise amplifier into which a radio frequency reception signal of a second frequency band is to be inputted, the second frequency band being different from the first frequency band; a second receiving mixer for the second frequency band into which an output signal from the second low noise amplifier is to be inputted; another circuit; a first input pin electrically connected to said first low noise amplifier, the radio frequency reception signal of the first frequency band to be applied to said first input pin; a second input pin electrically connected to said

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second low noise amplifier, the radio frequency reception signal of the second frequency band to be applied to said second input pin; and a third input pin electrically connected to said another circuit, wherein the first and second low noise amplifiers, said another circuit, and said first and second receiving mixers are monolithically integrated on one semiconductor chip, and wherein said first, second, and third input pins are disposed at a same side of a four-sided said semiconductor integrated circuit device, in a plane view, as recited in claims 18 and 31, and, further, where a sealing package encloses the semiconductor chip and a first, second, and third pad are formed on said semiconductor chip and electrically connected to said first low noise amplifier, second low noise amplifier, and said another circuit, respectively, and first, second, and third pin ends project to outside at the same side of said sealing package and electrically connect to said first, second, and third pads, respectively, as recited in claim 18.

Montalvo 6,522,895 discloses a semiconductor integrated circuit device comprising a first low noise amplifier into which a radio frequency reception signal of a first frequency band is to be inputted; a first receiving mixer for the first frequency band into which an output signal from the first low noise amplifier is to be inputted; a second low noise amplifier into which a radio frequency reception signal of a second frequency band is to be inputted, the second frequency band being different from the first frequency band; a second receiving mixer for the second frequency band into which an output signal from the second low noise amplifier is to be inputted; another circuit; a first input pin electrically connected to

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said first low noise amplifier, the radio frequency reception signal of the first frequency band to be applied to said first input pin; a second input pin electrically connected to said second low noise amplifier, the radio frequency reception signal of the second frequency band to be applied to said second input pin; and a third input pin electrically connected to said another circuit, wherein the first and second low noise amplifiers, said another circuit, and said first and second receiving mixers are monolithically integrated on one semiconductor chip, Note figure 1 and column 3 lines 2-38 of Montalvo. Montalvo does not suggest or disclose that said first, second, and third input pins should be disposed at a same side of said semiconductor integrated circuit device, in a plane view, said semiconductor device being four-sided.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is (571) 272-1913. The examiner can normally be reached on Monday through Thursday 8 AM to 6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

tld
02/2004